

## VIII

### **ESC AND ARMY ANALYSIS: THE YEARS IN PERSPECTIVE**

In the almost 40 years of its existence and under a variety of titles, the Engineer Studies Center has delved into a multitude of defense problems that have confronted the United States since World War II. While most of the issues ESC studied have been Engineer-related either in their origins or in their implications, the ramifications of these issues have touched upon many of the postwar concerns of the Defense Department. Although a small agency, ESC has become distinguished for both the range of its subject matter and the volume of its studies and reports. The center has earned a reputation as an adaptable and vigorous study organization.

While ESC has studied a wide variety of problems, its study repertory has undergone a distinct evolution (see figure 40). In the 1950s more than half of the studies involved issues relating to nuclear war, including strategic and tactical nuclear weapons and vulnerability analysis. When the Kennedy administration emphasized conventional forces, ESC's concern with nuclear subjects began to decline, and this decline proceeded steadily until the early 1980s when the center completed its last study with primary emphasis on nuclear weapons.

In place of nuclear warfare came a variety of subjects that diversified the organization's study repertory. Studies of general purpose forces, including force requirements, force structuring, mobility, and Army organization, became more numerous throughout the 1960s and into the 1970s when the Army strove to define the number, type, and organization of the conventional war forces that the country required. In the late 1960s and the early part of the next decade, base development planning became an important concern as the Army tried to assimilate lessons learned from the early logistical difficulties in Vietnam. The early 1970s also saw a substantial increase in management studies that sought to improve the organization and operation of an Army whose budget and manpower were declining from the peak years of the war in Southeast Asia. A disparate collection of miscellaneous study categories, including chemical and biological warfare, special engineering, civil works, and political assessments, also appeared in the two decades after 1960. Although none of them grew into major ESC concerns, they gradually absorbed more of the center's effort as work on the nuclear studies receded. This range of study subjects demonstrated the adaptability and versatility of the organization.

## FUNCTIONAL STUDIES CATEGORIES -- 1955-1982

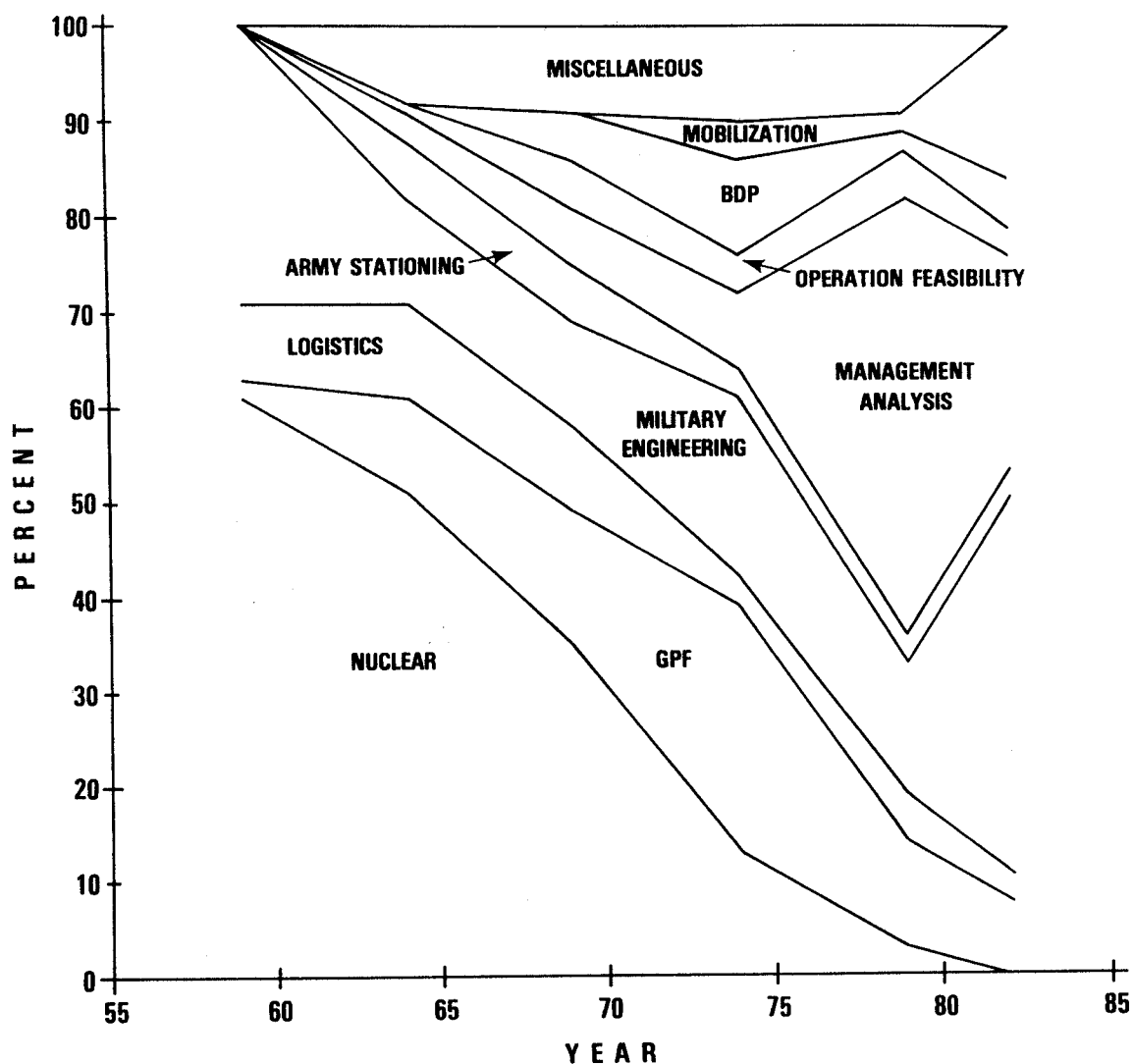


Figure 40

While the history of ESC study categories has shown marked tendencies toward change, there have been areas of continuity as well. The number of logistics studies diminished in the 1960s, but logistics remain a category that has occupied some of the center's attention since its beginning. Although work in the operational feasibility of new military technology and Army stationing began somewhat later, these subjects have persisted as areas of interest. In 1982 Army stationing culminated in a major study of a restationing concept for the Army in Europe. Even though these categories remained small segments of the ESC study agenda, they still produced important study efforts.

As ESC approached the 1980s, other trends became apparent. Military engineering had been a significant concern since the 1940s, but in

the 1960s and early 1970s it became somewhat less important. With the center's reorientation toward Engineer-related problems in the mid-1970s, military engineering again emerged as a major preoccupation. The new interest in the Engineer-related aspects of mobilization and the continuing work in management analysis, primarily for the Corps, more clearly identified ESC as an Engineer agency than had been the case for the previous two decades.

A survey of the sponsors of ESC studies confirms the trend toward Engineer-related work (see figure 41). For 20 years after 1955 most of the sponsors came from Army staff and Defense Department agencies outside the Corps of Engineers. The Deputy Chiefs of Staff for Operations sponsored ESC's work in nuclear warfare and general purpose forces, and the Deputy Chiefs of Staff for Logistics supervised much of the work in logistics and similar categories. Other Army staff agencies and Defense Department offices requested studies in a variety of fields, including special engineering, political assessments, and operational feasibility.

Beginning in the mid-1970s, however, the pattern of sponsorship changed dramatically. In place of Army staff and Defense Department studies, ESC turned heavily toward work for the Office of the Chief of Engineers (OCE) and other Engineer agencies. The diversity of sponsoring agencies shrank markedly, and just as Engineer-related studies filled the ESC study repertory, Engineer agencies filled the ranks of sponsors.

The geographical distribution of ESC's work has been as broad as the variety of subjects it has studied (see figure 42). In addition to studies focusing on Europe and Southeast Asia, two primary areas of concern since 1945, the center examined problems arising in places as exotic as Ethiopia, Panama, and Greenland and as familiar as the Middle East and Iran. ESC's broad geographic interests reflected the global concerns of the United States.

The center's staff has also been a diverse group. In the late 1940s and early 1950s the analysts were primarily retired officers with experience in World War II and the Korean War. But in the mid-1950s, with the growing interest in nuclear work, a large number of active duty officers and enlisted personnel joined the organization. In the 1960s and 1970s the civilian personnel, who always formed a majority of the group, came from increasingly diverse backgrounds and specialties. This mixture of civilian and military experience allowed ESC to undertake work in a wide variety of fields. In the mid-1970s, when the number of officers declined and enlisted personnel disappeared, the organization relied on the previous military experience of a large proportion of its civilian personnel. By the 1980s the ESC staff consisted of people with a variety of skills ranging from economics, sociology, history, geography, cartography, engineering, computer programming, word processing, graphic arts, operations research, and systems analysis, in addition to the military backgrounds of the active duty, reserve, and former reserve personnel.

# ESC SPONSORS -- 1955-1982

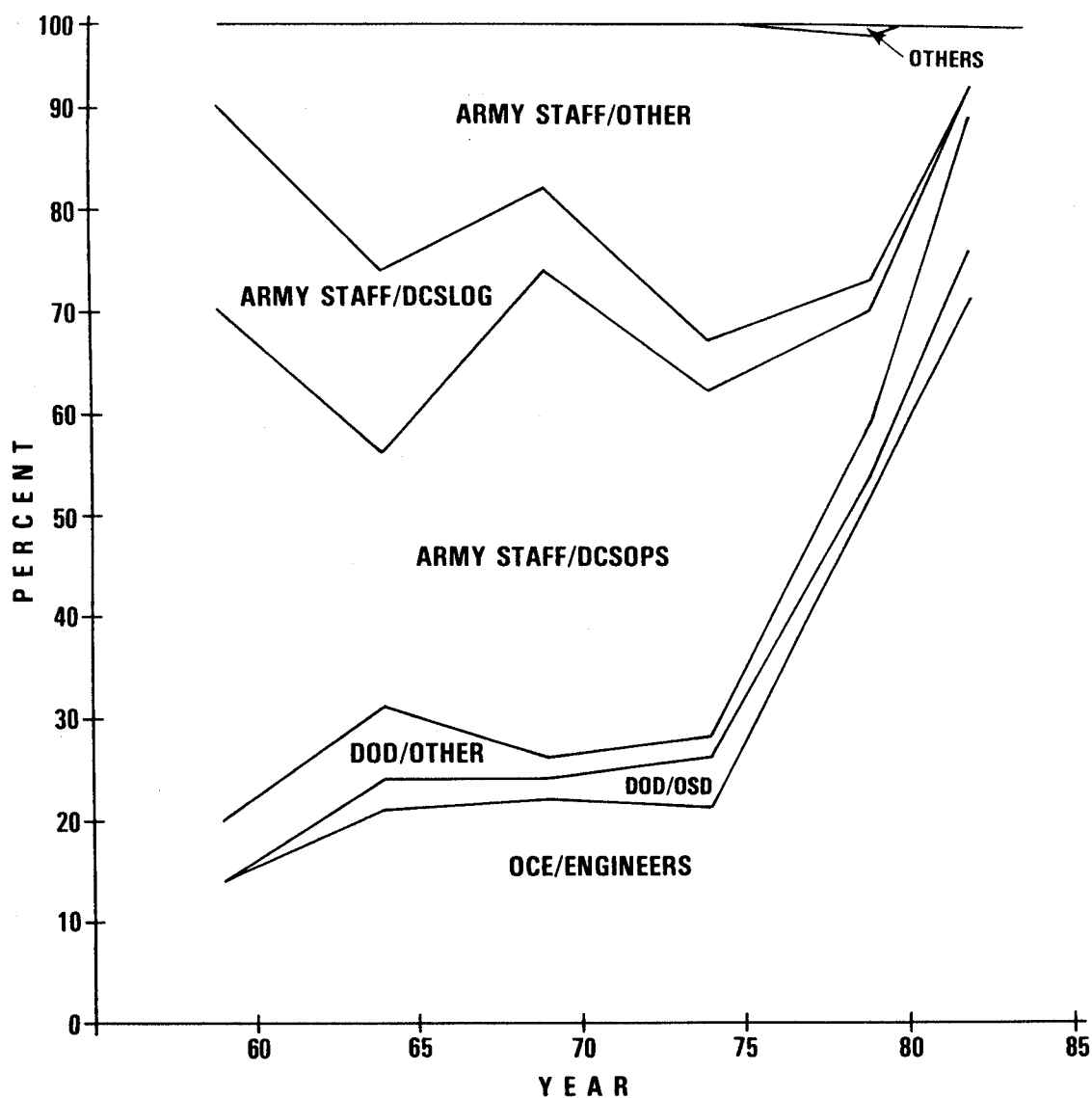


Figure 41

The diversity of ESC personnel has been manifested beyond technical disciplines. The eight analysts of the Planning Branch who moved to the Army Map Service in 1947 were all men, but by the early 1970s the organization had women and minorities in nonclerical positions. Through a combination of recruitment, on-the-job training, and promotion within the organization, the center has encouraged the growth of diversity in areas beyond the subject specialties.

As the center's staff changed in the 1970s, so did its internal organization and management. Prior to its 1970 reorganization, ESC had the hierarchical structure typical of most military and governmental agencies. The flat, project-oriented structure adopted in 1970 enabled the center to have greater flexibility and removed many of the internal barriers that

# AREAS OF ESC ANALYSIS

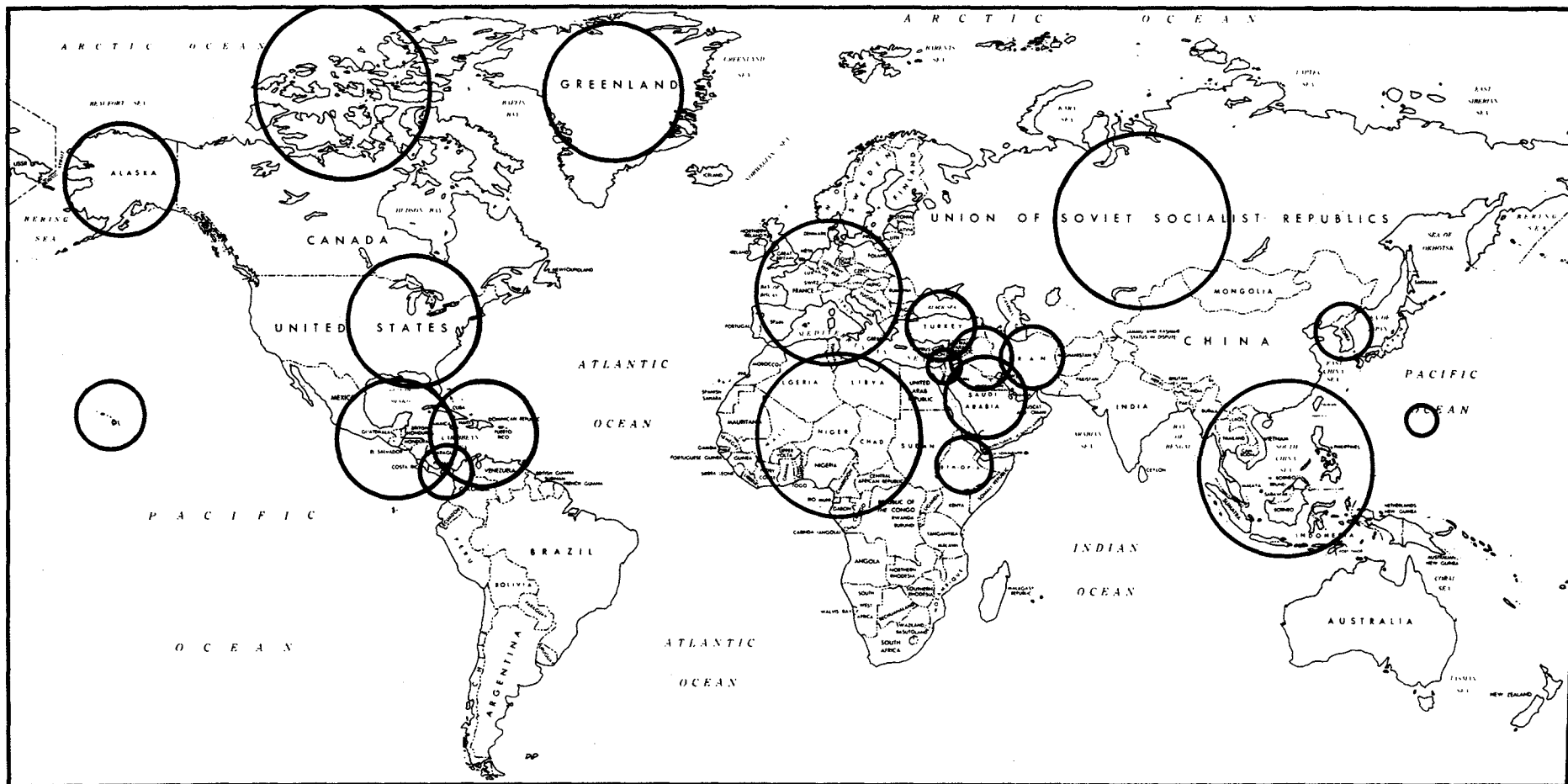


Figure 42

isolated people in narrow specialties. The reorganization prepared ESC for the dramatic shift in the mid-1970s to a study repertory dominated by Engineer or Engineer-related topics. The formation of a corporate management board also reduced the hierarchical nature of the organization and brought wider staff involvement in the management and policy-making of the center. ESC's organizational and managerial flexibility helped it to adapt to a changing external environment and avoid the danger of becoming a redundant, inflexible, and possibly expendable part of the Army study system.

Internal flexibility also allowed ESC to incorporate new organizational techniques that improved productivity and working conditions. Long before the practice became common in government agencies, ESC had experimented with flexible working hours. The consolidation of support functions in the Administrative and Production Services Office improved productivity and allowed better management of these functions. ESC was one of the first government agencies to use modern word processing equipment, and the importance of graphics for both studies and briefings is reflected in the well-equipped and highly professional graphics branch. While ESC analysts have worked with computers at AMS and other agencies since the early 1960s, the center obtained its first data processing equipment in 1980, and has trained a large proportion of its staff to work with computers. ESC has been a pioneer not only in the topics and the technical aspects of its study, but also in organizational, managerial, and work practices.

The final products, however, are the published studies that have been the ultimate criteria for judging the quality and effectiveness of the organization. In addition to the quality of the studies, the center has always stressed effective and cogent presentation of the studies' conclusions. Since the 1950s, ESC has placed great emphasis on meaningful graphic presentations and clear briefings. Often a well-developed briefing has been the most effective vehicle for influencing the study sponsor and other highly placed decisionmakers. ESC has always contended that it is "not in the business of producing attractive, involved reference books and papers to sit on library shelves."<sup>1</sup> Unlike other study agencies, the center always concluded its studies with specific recommendations that the sponsor could realistically implement. Although the studies still provide the best reference for ESC's thought, the briefings, graphics, interim reports, formal and informal meetings with the sponsors, and its reputation in the Defense community have also assisted in conveying the messages that each study embodied.

For almost four decades, the Engineer Studies Center, under its various titles, has been a unique resource of the Defense Department. Its long organizational history, broad study repertory, pioneering study efforts, and adaptability have set ESC apart from other study and analysis agencies, both within and outside of the federal government. Just as the

Engineer Studies Center of 1982 is different from the Planning Branch of 1943 or the Military Plans Division of 1950, it can be anticipated that ESC's future will bring new and unexpected challenges and new and different accomplishments.

### **Note for Chapter VIII**

1. *Engineer Studies Center* (Washington, DC: n.p., n.d.), p. 3.

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